

Poster Reviews -- We Can Do Better!

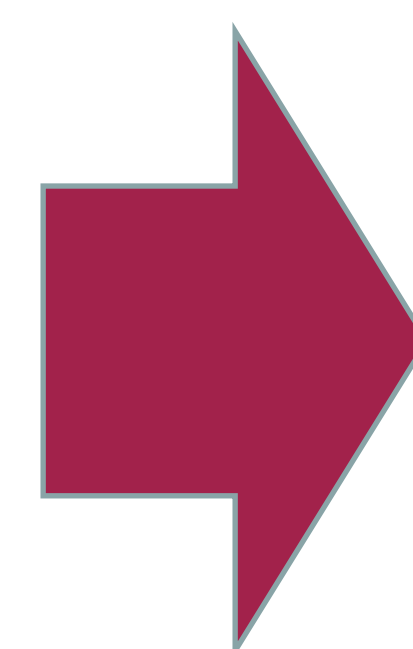
Michael Spiess¹

Rubric For More Consistent Reviews

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The Need for More Consistent Reviews	Inconsistent reviews are a frustration expressed by authors as well as poster session chairs. To quantify this anecdotal complaint an Agreement Score was developed to quantify the agreement between reviewers. Reviewers were found to have large disagreement on over 40% of reviews. Providing a more detailed rubric to the reviewers was seen as a possible solution.	Rubric Score vs. Acceptance Score Poster reviewers provide a score (0-100) based on the rubric then provide an acceptance recommendation (score; Reject=1, Possibly Reject=2, Possible Accept=3, Accept=4). These are independent scores.	Agreement Score – A Useable Metric The agreement score is the absolute value of the difference between the reviewers' acceptance scores. For example, if the reviewers score an abstract 3,3, and 4 the discrepancy is $ 3-3 + 4-3 + 4-3 = 2$. The lower the score the more the reviewers agreed. This score provides an objective metric to evaluate the agreement of the reviewers.																																																																																																																																																																																					
How It Works	For many years the online review system provided reviewers with a simple rubric and reviewers awarded points. Beginning in 2020 poster session chairs had the option to use an enhanced (new) rubric that provided guidance in awarding points. In the new version the reviewer could simply select the criteria and points would be awarded. Three conferences to date have used this new rubric. The reviewer does have the option to enter another value. (See rubrics below.)	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">All Types*</th> <th colspan="4">Research</th> <th colspan="4">Idea</th> </tr> <tr> <th colspan="2">Old Rubric</th> <th colspan="2">New Rubric</th> <th colspan="2">Old Rubric</th> <th colspan="2">New Rubric</th> <th colspan="2">Old Rubric</th> <th colspan="2">New Rubric</th> </tr> <tr> <th>Agreement</th> <th>Count</th> <th>Percent</th> <th>Count</th> <th>Percent</th> <th>Count</th> <th>Percent</th> <th>Count</th> <th>Percent</th> <th>Count</th> <th>Percent</th> <th>Count</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>571</td> <td>16.86%</td> <td>42</td> <td>20.19%</td> <td>263</td> <td>14.62%</td> <td>23</td> <td>18.40%</td> <td>296</td> <td>18.94%</td> <td>19</td> <td>22.89%</td> </tr> <tr> <td>1**</td> <td>58</td> <td>1.71%</td> <td></td> <td></td> <td>21</td> <td>1.17%</td> <td></td> <td></td> <td>30</td> <td>1.92%</td> <td>38</td> <td>45.78%</td> </tr> <tr> <td>2</td> <td>1310</td> <td>38.69%</td> <td>89</td> <td>42.79%</td> <td>691</td> <td>38.41%</td> <td>51</td> <td>40.80%</td> <td>621</td> <td>39.73%</td> <td>15</td> <td>18.07%</td> </tr> <tr> <td>3**</td> <td>14</td> <td>0.41%</td> <td></td> <td></td> <td>4</td> <td>0.22%</td> <td></td> <td></td> <td>7</td> <td>0.45%</td> <td>11</td> <td>13.25%</td> </tr> <tr> <td>4</td> <td>974</td> <td>28.77%</td> <td>48</td> <td>23.08%</td> <td>556</td> <td>30.91%</td> <td>33</td> <td>26.40%</td> <td>415</td> <td>26.55%</td> <td></td> <td></td> </tr> <tr> <td>6</td> <td>434</td> <td>12.82%</td> <td>29</td> <td>13.94%</td> <td>254</td> <td>14.12%</td> <td>18</td> <td>14.40%</td> <td>179</td> <td>11.45%</td> <td></td> <td></td> </tr> <tr> <td>Mostly Agree:</td> <td colspan="2">57.68%</td> <td colspan="2">62.98%</td> <td colspan="2">54.42%</td> <td colspan="2">59.20%</td> <td colspan="2">61.04%</td> <td colspan="2">68.67%</td> </tr> <tr> <td>Mostly Disagree:</td> <td colspan="2">42.32%</td> <td colspan="2">37.02%</td> <td colspan="2">45.58%</td> <td colspan="2">40.80%</td> <td colspan="2">38.96%</td> <td colspan="2">31.33%</td> </tr> <tr> <td>Posters:</td> <td colspan="2">3361</td> <td colspan="2">208</td> <td colspan="2">1789</td> <td colspan="2">125</td> <td colspan="2">1548</td> <td colspan="2">83</td> </tr> <tr> <td>Reviews:</td> <td colspan="2">10027</td> <td colspan="2">624</td> <td colspan="2">5361</td> <td colspan="2">375</td> <td colspan="2">4616</td> <td colspan="2">249</td> </tr> <tr> <td>Mean SD***:</td> <td colspan="2">11.59</td> <td colspan="2">11.57</td> <td colspan="2">11.7</td> <td colspan="2">12.05</td> <td colspan="2">11.36</td> <td colspan="2">10.84</td> </tr> </tbody> </table> <p>* Review data 2010 to July 2021 ** Odd scores occur when < 3 reviews. *** Mean SD for poster scores (most commonly 3).</p>			All Types*				Research				Idea				Old Rubric		New Rubric		Old Rubric		New Rubric		Old Rubric		New Rubric		Agreement	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	0	571	16.86%	42	20.19%	263	14.62%	23	18.40%	296	18.94%	19	22.89%	1**	58	1.71%			21	1.17%			30	1.92%	38	45.78%	2	1310	38.69%	89	42.79%	691	38.41%	51	40.80%	621	39.73%	15	18.07%	3**	14	0.41%			4	0.22%			7	0.45%	11	13.25%	4	974	28.77%	48	23.08%	556	30.91%	33	26.40%	415	26.55%			6	434	12.82%	29	13.94%	254	14.12%	18	14.40%	179	11.45%			Mostly Agree:	57.68%		62.98%		54.42%		59.20%		61.04%		68.67%		Mostly Disagree:	42.32%		37.02%		45.58%		40.80%		38.96%		31.33%		Posters:	3361		208		1789		125		1548		83		Reviews:	10027		624		5361		375		4616		249		Mean SD***:	11.59		11.57		11.7		12.05		11.36		10.84	
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Results To Date	<ul style="list-style-type: none"> ❖ Three conferences have used the new rubric. Acceptance recommendation score agreement improved. ❖ The mean standard deviation of poster reviews went down slightly (better agreement in scores) but increased for research type posters. ❖ There are differences between the two types: Research and Idea. 	<ul style="list-style-type: none"> ❖ Survey reviewers for their ideas. The poster system tracks reviewers and the number of reviews completed. ❖ Consider an online training video for reviewers. This might be helpful for new reviewers. 																																																																																																																																																																																						
Future Plans / Advice to Others	<ul style="list-style-type: none"> ❖ Use the new rubric for all poster sessions. ❖ Consider a rubric for acceptance scoring. Currently the only guidance reviewers have is a ranking of their rubric scores. ❖ Consider refining the rubrics. The "new" rubric was developed over 20 years ago. 	<ul style="list-style-type: none"> ❖ Expand this concept to conference paper reviews. 																																																																																																																																																																																						
Cost	<ul style="list-style-type: none"> ❖ No cost was involved in this change to the online system as the developer of the poster system made the required changes as part of the annual fee. Overall about 4 hours of labor were involved in coding and testing. Similar changes in other systems would depend on the developer. 	<ul style="list-style-type: none"> ❖ Actual rubrics are entered online by the poster system administration using an online form. These can be changed at any time. ❖ Entering new rubrics would take less than an hour. The system is designed to allow independent rubrics for each poster session (e.g., Western Region 2021) and type (e.g., Research). 																																																																																																																																																																																						

Old (Original) Rubric for Research Type

Research Criteria	Possible Points
Introduction/Need for research	10
Conceptual or theoretical framework	15
Methodology	15
Results/Findings	15
Conclusions	15
Implications/ Recommendations/Impact on Profession	15
References	5
Clarity and Grammar (format)	10
Total points earned:	100



New (Enhanced) Rubric for Research Type

Research Criteria	Possible Points	Ratings*: Needs Improvement	Acceptable	Outstanding
Introduction/Need for Research	10	Research is esoteric and would have limited implications to the broader AAAE community. (3)	Research has a regional need and is tied to the AAAE Research Agenda. (7)	Research has a broad need and is tied to the AAAE Research agenda. (10)
Conceptual or Theoretical Framework	15	Minimal effort to describe the foundations of this research. No theory identified. (5)	The framework is appropriate, but lacking detail. Theory is identified but may not be well supported. (10)	The framework clearly shows that this research is solidly built on previous work. A relevant theory is identified. (15)
Methodology	15	Methods seem inappropriate, poorly described and hard to follow. (5)	Methodology is generally appropriate but would be hard to reproduce from the description given. (10)	Methodology is very appropriate, well described and could be easily reproduced. (15)
Results/Findings	15	Study has not been completed (0 points) or results poorly described. (5)	Results are adequately described and tied to the methodology. (10)	Results are well described and clearly connected to the methodology. (15)
Conclusions	15	Conclusions are not supported by results. (5)	Conclusions are generally supported by the results of the research. (10)	Conclusions are clearly supported by the results of the research. (15)
Implications/ Recommendations/Impact on Profession	15	No or minimal implications / recommendations / impact on profession. (5)	Author makes adequate recommendations or description of the implications / impact based on this research. (10)	Author makes excellent recommendations or description of the implications / impact based on this research. (15)
References	5	No References. (0)	Minimal references or inappropriate references. (3)	References provide a good foundation for the poster. (5)
Clarity and Grammar (format)	10	Difficult to read, spelling and grammar errors common. (4)	Minimal spelling and grammar errors, easy to read, generally follows style requirements. (7)	No obvious grammar or spelling errors. Easy read. Follows style requirements as described in the "Call". (10)
Total points earned:	100	* () = automatic points awarded; reviewer can override.		

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